

REMARKS

This Amendment is in response to the Office Action mailed on September 5, 2006. In that Office Action, the Examiner rejected claims 1-20. In this Amendment, claims 12-13 and 15-20 have been canceled, new claims 21-28 have been added and claims 1, 3, 6-10 and 14 have been amended.

Claim Rejections Based Upon The Judicially Created Doctrine of Obviousness-Type Double Patenting

In the Office Action, the Examiner rejected claims 1-20 under the judicially created doctrine of obviousness-type double patenting as allegedly being unpatentable over claims 1-15 of U.S. Patent No. 6,033, 692. Applicant files a Terminal Disclaimer along with this Amendment. Applicant believes that filing the Terminal Disclaimer is sufficient to overcome the Examiner's rejections under the judicially created doctrine of obviousness-type double patenting. Therefore, Applicant respectfully requests that the Examiner enter the Terminal Disclaimer and withdraw the rejections to pending claims 1-11 and 14.

Claim Rejections Under 35 U.S.C. 112

The Office Action rejected claims 12-13 under the first paragraph of 35 U.S.C. 112 as allegedly failing to comply with the written description requirement. As noted, claims 12-13 have been canceled. Therefore, the rejection is moot.

The Office Action further rejected claims 10 and 16-18 under the second paragraph of 35 U.S.C. 112 as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. As noted, claims 16-18 have been canceled while claim 10 has been amended to recite "raw whole vegetable composition". It is believed the amendment to claim 10 places claim 10 in allowable form. Therefore, reconsideration and allowance of claim 10 is respectfully requested.

Claim Rejections Under 35 U.S.C. 102(b)

The Office Action rejected claims 1-9, 11, 14-16 and 18-20 as allegedly being unpatentable over U.S. Patent No. 3,640,723 issued to Uhlig et al, hereinafter referred to as the "Uhlig patent". According to the Office Action, the Uhlig patent discloses enzymatic treatment of

soybean meal with a pectolytic enzyme along or in combination with a cellulase, or a cellulase and a hemicellulase. As noted, independent claims 1, 7, 9 and 14 have been amended to recite the term "raw whole vegetable composition" while claims 15 and 16 were cancelled. As defined in the above-identified application on Page 16, lines 8-10, the term "whole" refers to a raw vegetable composition that has not been subjected to techniques like maceration, pulverization, grating, grinding or the like. Soya meal includes soybeans that have been subjected to maceration, pulverization, grating, grinding or the like and therefore soya meal is not a whole vegetable composition. Since the Uhlig patent discloses the enzymatic treatment of soya meal and not whole vegetable compositions, the Uhlig patent does not disclose the present invention as defined in independent claims 1, 7, 9 and 14. Independent claims 1, 7, 9 and 14 are believed allowable in the present form. Since independent claims 1, 7, 9 and 14 are believed allowable in their present form, dependent claims 2, 6, 8, and 10-11 are also believed allowable. Therefore, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1-9, 11 and 14 under U.S.C. §103(a) and that claims 1-9, 11 and 14 be allowed.

Claim Rejections under 103(a)

The Office Action rejected claims 1-8 and 14-20 under 35 U.S.C. 103(a) as allegedly being unpatentable over U.S. Patent No. 3,705,810 issued to Lendvay, hereinafter referred to as the "Lendvay patent". According to the Office Action, the Lendvay teaches the addition of cellulase, hemicellulase and/or pectinase to green coffee beans by soaking the green coffee beans in water containing said enzymes. Despite the comments in the Office Action, the Lendvay patent does not teach or render-obvious pending claims 1-8 and 14 in their present form.

Under 35 U.S.C. §103(a), the Examiner bears the burden of establishing a prima facie case of obviousness. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). If the Examiner does not establish a prima facie case of obviousness, the rejection is improper and will be overturned. *In re Rijckaert*, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish a prima facie case of obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 180 U.S.P.Q. 580 (C.C.P.A. 1974). "All the words in a claim must be considered in judging the patentability of that claim against the prior art." *In re*

Wilson, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970). If an independent claim is non-obvious under 35 U.S.C. §103, then any claim depending therefrom is non-obvious. *In re Fine*, 5 U.S.P.Q.2d at 1600.

The Examiner has failed to establish a prima facie case of obviousness because the Lendvay patent does not disclose each and every element of independent claims 1, 7 and 14. Only claims 1, 7 and 14 will be discussed because if the independent claims are non-obvious then the dependent claims are also non-obvious. See, *In re Fine*, 5 U.S.P.Q.2d at 1600.

Independent claims 1, 7 and 14 in their present form define, in part, a method of processing a raw whole vegetable composition by applying an aqueous enzyme composition that includes cellulases and proteases for a time that is effective to degrade the raw whole vegetable composition. The raw whole vegetable compositions that are suitable for use in the present invention are those vegetable compositions that are raw and have not been processed (see page 15, lines 23-25 of the Detailed Description, for example). Therefore, the present invention describes raw whole vegetable compositions in their unprocessed state can be degraded or hydrolyzed using enzymes, such as cellulases and proteases without first having to modify the raw vegetable composition prior to enzymatic degradation. Green coffee beans are processed coffee beans that have not yet been roasted (see Exhibit A of the Amendment). Processing of coffee beans to form green coffee beans includes sun drying and milling, or fermenting and pulping. Therefore, green coffee beans are processed beans and not raw beans as defined in independent claims 1, 7 and 14. Since green coffee beans are processed coffee beans and not raw beans, the Lendvay patent does not teach or render-obvious the invention as defined in claims 1, 7 and 14 in their present form.

Independent claims 1, 7 and 14 are believed allowable in their present form. Because claims 2-6 depend from independent claim 1 which is non-obvious, claims 2-6 are also non-obvious. Since claim 8 depends from independent claim 14 which is non-obvious, claim 8 is also non-obvious. Therefore, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1-8 and 14 under U.S.C. §103(a) and that claims 1-8 and 14 be allowed.

The Office Action further rejected claims 1-9, 11 and 14-20 under 35 U.S.C. 103(a) as allegedly being unpatenable over U.S. Patent No. 3,845,220 issued to Suzuki, hereinafter referred to as the "Suzuki patent". According to the Office Action, the Suzuki patent discloses the production of an enzymatically-treated coffee liquid. Furthermore, the Office Action states treatment of parched coffee beans (i.e. dried coffee beans which have not been boiled) with the enzyme solution occurs followed by heat sterilization to deactivate the enzymes. Nevertheless, Applicant respectfully disagrees with the reading of the Suzuki patent and notes the Suzuki patent does not teach the present invention as defined in pending claims 1-9, 11 and 14.

As noted, claims 15-20 have been cancelled while claims independent claims 1, 7 and 14 have been amended to define, in part, a method of processing raw whole vegetable compositions by applying an enzyme composition that includes a cellulase and at least one protease for a time that is effective to degrade the raw whole vegetable composition. Hence, the application of the aqueous enzyme composition in the present invention is to a raw whole vegetable composition. On the other hand, the Suzuki patent teaches and discloses application of an enzyme mixture to parched coffee beans that have been held at 30 to 50°C for an indefinite period of time (see column 3, lines 53-56). As noted in the Suzuki patent, soaking the parched coffee beans in water releases a coffee extract into the liquid. The coffee extract liquid is then subjected to enzymatic degradation using an enzyme mixture (see column 3, lines 53-56). Hence, the enzyme mixture is used to treat the coffee extract liquid and not the parched coffee beans. As described in the present application, such as at page 15, lines 23-25 of the Detailed Description, the aqueous enzyme composition is applied to a raw vegetable composition. The Suzuki patent does not teach application of the enzyme mixture to a raw vegetable composition, but rather to a coffee extract liquid. Hence, the Suzuki patent does not teach the present invention as defined in independent claims 1, 7, and 14.

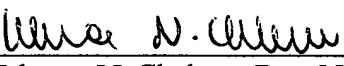
Furthermore, the present invention describes treatment of raw vegetable compositions with enzymes without first having to modify the raw vegetable compositions with boiling, cooking or the like (See page 18, lines 7-17 of the Detailed Description). On the other hand, when the enzyme mixture of the Suzuki patent is added to the mixture of the parched beans

and water, the parched beans have been soaking in the warm water for an indefinite period of time (see column 3, lines 53-56 of the Suzuki patent). Hence, once the enzyme mixture is added, the enzyme mixture is not being applied to parched beans of the Suzuki patent. Rather, the enzymes are being applied to soaked beans that have released coffee extract into the liquid. Soaked parched beans are not the same as the raw vegetable compositions as specified in pending independent claims 1, 7 and 14. For this reason and the arguments presented above, the Suzuki patent does not teach the present invention as defined in independent claims 1, 7 and 14.

Independent claims 1, 7 and 14 are believed allowable. Because claims 2-6 depend from independent claim 1 which is non-obvious, claims 2-6 are also non-obvious. Since claim 8 depends from independent claim 7 which is non-obvious, claims 8 and 11 is also non-obvious. Therefore, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1-9, 11 and 14 under U.S.C. §103(a) and that claims 1-9, 11 and 14 be allowed.

It is believed claims 1-11, 14 and 21-28 are in allowable form. Consequently, reconsideration and allowance of claims 1-11 and 14 is respectfully requested. In addition, new claims 21-28 are believed to be in allowable form. New claims 21-28 do not add new matter. Therefore, consideration and allowance of new claims 21-28 is respectfully requested.

Respectfully submitted,

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THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named

Inventor : Uchenna N. Chukwu

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Title : Vegetable Processing

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Group Art Unit: 1761

Examiner: Hendricks,
K

EXHIBIT A
of
AMENDMENT

“Caribbean Gold Coffee
The Finest Gourmet Arabica Coffee
Glossary of Coffee Terms”

obtained from <http://www.caribbeangoldcoffee.com/coffee/coffee-terms-glossary.htm>

highlighting the definitions of the terms

“Green” and “Processing”

downloaded on December 4, 2006.



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Caribbean Gold Coffee

The Finest Gourmet Arabica Coffee

Glossary of Coffee Terms

Coffee Terms

Acidity: a highly desirable quality in coffee. All good coffees have some degree of acidity. In fine coffees acidity results in a pleasant sharpness. Acidity addresses the coffee's flavor and is assessed as lively, moderate, flat or dull. Similar to dryness in wine. The darker a coffee is roasted, the more its acidity dissipates.

Aftertaste: The taste residual left in the mouth after swallowing. Characteristics can range from sweet or spicy, smokey, light, heavy or long lasting. Also known as **finish**.

Arabica: (*Coffea Arabica*) considered to be the best variety of coffee. Most of the world's specialty coffee is Arabica which has a much more delicate flavor than the hardier Robusta.

Aroma: The fragrance of brewed coffee that can be characterized as "floral" or "winy".

Balanced: A characteristic that indicates a complexity of flavors and aromas although one quality does not stand out above another.

Bitter: An over roasted coffee that produces a harsh unpleasant aftertaste.

Blend: A mixture of one or more varieties or species of coffee beans. The beans may be mixed before or after roasting.

Bright: A characteristic of fine coffees. Describes a lively, sparkling taste and appearance.

Body: How heavy a coffee feels in your mouth. It is the result of the amount of sediment or oil present in the coffee. To determine the body sip it and let it rest on the tongue before swallowing. Body is described as light, medium, full, or very full and will vary depending on the origin of the coffee and the choice of brewing method. Coffees with a heavier body will maintain more flavors. The same individual coffee won't have both a lot of acidity and body.

Bouquet: The smell of coffee grounds.

Caffeine: A bitter alkaloid contained in coffee and tea that stimulates the central nervous system and, in the right amounts, causes adrenaline to be released. Caffeine can enhance heart function, and is said to help with intellect. Too much caffeine can over stimulate you and be uncomfortable.

Complex: A taste or aroma with many aspects (as opposed to simple).

Cupping: Tasting by coffee professionals to assess their qualities and characteristics. Used to determine which roast to apply to the coffee.

Decaffeination: Coffee with 97% caffeine removed is classified as decaffeinated.

Decaffeination Process: Coffees are decaffeinated in their green state. Using one of three processing methods: Traditional or European process, Water-Only Process, or the Sparkling Water Process.

Delicate: Characterized by a fragile, mellow or subtle flavor and found in washed Arabica coffees.

Dry: A coffee with a parching or drying aftertaste.

Earthy: An undesirable odor and taste that resembles freshly turned soil. It is found in low grade coffee and usually due to poor preparation conditions.

Espresso: A rich black coffee resulting from the process of forcing water through packed, finely ground coffee at high pressure and at a high rate of speed.

Exotic: Unusual aromatic and flavors such as berry or floral.

Flavor: As the overall sensation of drinking a particular coffee flavor includes both taste and aroma and is influenced by both the roasting process as well as the origins of the bean. Coffee can impart a taste of the soil or even of other plants grown in the region. To fully experience the flavor smell it first as you taste it.

- Fragrance:** The aromatic sensations inhaled by sniffing; can be described as ranging from floral to spicy
- Fruity:** Either a sweet sensation reminiscent of citrus fruit or a dry sensation reminiscent of berry fruit.
- Full:** Indicates a strong indication of a characteristics such as acidity, body, or range of flavors.
- Grassy:** A tainted flavor to the coffee often resulting from impure water used in the washing of the beans or from faulty drying process.
- Green:** Processed coffee that is not yet roasted.
- Hard bean:** Beans grown at high elevations mature more slowly and are harder and denser than other beans. These fine beans produce a more concentrated and intense flavor. Also called: **High Grown**
- Herbal:** An aroma reminiscent of grass, dried herbs or grains, or fresh foliage.
- Mellow or Mild:** Balanced coffee, implying low or medium acidity.
- Mouthfeel:** Refers to how a coffee feels in your mouth.
- Neutral:** A flavor characteristic that is desirable in good blenders.
- Nutty:** A roasted nut aroma
- Processing:** The act of removing the coffee cherry pulp from the seeds. Coffee cherries are either sun dried and milled, or fermented and pulped.
- Rich:** Coffee with depth and complexity of flavor, full body, and an overall satisfying taste.
- Roasting:** The application heat applied to green coffee beans for the purpose of developing certain flavor characteristics.
- Roasty:** A bittersweet smoky flavor emitted by a dark roast.
- Rough:** Characterized by a parched, dry sensation on the tongue, related to sharp, salty taste sensations
- Smooth:** low in acidity
- Soft bean:** Beans grown at relatively low altitudes mature more quickly and produce a lighter, more less denser bean.
- Spicy:** An aromatic and taste perception reminiscent of either wood-spice (cinnamon) or wood-seed (Clove).
- Stale:** Coffee that is flat with a cardboard taste due to being exposed to oxygen for too long.
- Sweet:** Smooth and tasty with no tinge of harshness.
- Strength:** The ratio of ground coffee to water.
- Thin:** No acidity, a lifeless flavor due to underbrewing.
- Tone:** The appearance or color of coffee.
- Varietal:** A single or straight coffee from one region or country of origin.
- Winy:** Full bodied, smooth yet lively, similar to a well-matured red wine

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Coffees: French Roast • Breakfast Blend • Colombian Supremo • Colombian Decaffeinated • Royal Caribbean Blend • Kenya AA • Jamaican Blue Mountain #1 Estate • Espresso
Flavored Coffees: French Vanilla • Hazelnut • Kalua Creme
Caribbean Gold Teas: Caribbean Gold Iced & Seasoned Teas



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